

AMENDMENTS TO THE CLAIMS

Please amend the claims as indicated below. The language being added is underlined ("___") and the language being deleted contains a strikethrough ("~~—~~").

LISTING OF CLAIMS

1. (Canceled)

2. (Currently Amended) ~~The method of claim 1~~ A method for selecting a spectral mask for use with a DSL system, the method comprising:
obtaining a weighted ratio of upstream rates and downstream rates;
determining whether a cost function, based in part upon the weighted ratio, is greater than a predetermined value, wherein determining whether a cost function is greater than a predetermined value further comprises: determining a cost function according to the relation: $\text{cost function} = 2 * (\text{dsrate}(2) - \text{dsrate}(1)) - \text{dsrate}(1) + (\text{usrate}(2) - \text{usrate}(1)) / \text{usrate}(1)$, wherein $\text{dsrate}(1)$ is the downstream rate of a first mask, $\text{dsrate}(2)$ is the downstream rate of a second mask, $\text{usrate}(1)$ is the upstream rate of the first mask and $\text{usrate}(2)$ is the upstream rate of the second mask; and
selecting a spectral mask based in part upon the determination of whether the cost function is greater than a predetermined value.

3. (Canceled)

4. (Currently amended) The method of claim 2 wherein the predetermined value is zero and wherein, if the cost function is greater than zero, the second mask is selected ~~selected~~.

5. (Original) The method of claim 2 wherein the f is a frequency band in kHz and the upstream value of the first mask is given by the following relations for $U1$ in dBm/Hz:

for $0 \leq f < 4$, then $U1 = -101.5$;

for $4 < f < 25.875$, then $U1 = -96 + 23.4 \times \log_2(f/4)$;

for $25.875 \leq f < 60.375$, then $U1 = -32.9$;

for $60.375 \leq f < 686$, then $U1 = \max\{-32.9 - 95 \times \log_2(f/60.38), 10 \times \log_{10}[0.05683 \times (f \times 10^3)^{-1.5}] - 3.5\}$;

for $686 \leq f < 1411$, then $U = -103.5$;

for $1411 \leq f < 1630$, then $U1 = -103.5$ peak, -113.5 average in any $[f, f+1 \text{ MHz}]$ window; and

for $1630 \leq f < 12000$, then $U1 = -103.5$ peak, -115.5 average in any $[f, f+1 \text{ MHz}]$ window.

6. (Original) The method of claim 2 wherein the f is a frequency band in kHz and the downstream value of the first mask is given by the following relations for $D1$ in dBm/Hz:

for $0 \leq f < 4$, then $D1 = -101$;

for $4 \leq f < 25.875$, then $D1 = -96 + 20.79 \times \log_2(f/4)$;

for $25.875 \leq f < 91$, then $D1 = -40$;

for $91 \leq f < 99.2$, then $D1 = -44$;

for $99.2 \leq f < 138$, then $D1 = -52$; for $138 \leq f < 353.625$, then $D1 = -40.2 + 0.0148 \times (f - 138)$;

for $353.625 \leq f < 552$, then $D1 = -37$;

for $552 \leq f < 1012$, then $D1 = -37 - 36 \times \log_2(f/552)$;

for $1012 \leq f < 1800$, then $D1 = -68.5$;

for $1800 \leq f < 2290$, then $D1 = -68.5 - 72 \times \log_2(f/1800)$;

for $2290 \leq f < 3093$, then $D1 = -93.500$;

for $3093 \leq f < 4545$, then $D1 = -93.5$ peak, average $-40 - 36 \times \log_2(f/1104)$ in any $[f, f+1]$ MHz window; and

for $4545 \leq f < 12000$, then $D1 = -93.5$ peak, average -113.500 in any $[f, f+1]$ MHz window.

7. (Original) The method of claim 2 wherein the f is a frequency band in kHz and the upstream value of the second mask is given by the following relations for $U2$ in dBm/Hz:

for $0 \leq f < 4$, then $U2 = -101.5$;

for $4 \leq f < 25.875$, then $U2 = -96 + 21.5 \times \log_2(f/4)$;

for $25.875 \leq f < 103.5$, then $U2 = -36.4$;

for $103.5 \leq f < 686$, then $U2 = \max\{-36.3 - 95 \times \log_2(f/103.5), 10 \times \log_{10}[0.05683 \times (f - 10^3)^{-1.5}] - 3.5\}$;

for $686 \leq f < 1411$, then $U2 = -103.5$;

for $1411 \leq f < 1630$, then $U2 = -103.5$ peak, -113.5 average in any $[f, f+1 \text{ MHz}]$ window; and

for $1630 \leq f < 12000$, then $U2 = -103.5$ peak, -115.5 average in any $[f, f+1 \text{ MHz}]$ window.

8. (Original) The method of claim 2 wherein the f is a frequency band in kHz and the downstream value of the second mask is given by the following relations for $D2$ in dBm/Hz:

for $0 \leq f < 4$, then $D2 = -101.5$;

for $4 \leq f < 80$, then $D2 = -96 + 4.63 \cdot \log_2(f/4)$;

for $80 \leq f < 138$, then $D2 = -76 + 36 \cdot \log_2(f/80)$;

for $138 \leq f < 276.000$; then $D2 = -42.95 + 0.0214 \cdot f$;

for $276 \leq f < 552.000$; then $D2 = -37$;

for $552 \leq f < 1012$, then $D2 = -37 - 36 \cdot \log_2(f/552)$;

for $1012 \leq f < 1800$, then $D2 = -68.5$;

for $1800 \leq f < 2290$, then $D2 = -68.5 - 72 \cdot \log_2(f/1800)$;

for $2290 \leq f < 3093$, then $D2 = -93.5$;

for $3093 \leq f < 4545$, then $D2 = -93.5$ peak, average $-40 - 36 \cdot \log_2(f/1104)$ in any $[f, f+1 \text{ MHz}]$ window; and

for $4545 \leq f < 12000$, then $D2 = -93.5$ peak, average -113.500 in any $[f, f+1 \text{ MHz}]$ window.